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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,719	04/02/2004	Isidro Hidalgo Carpintero	Q80723	9428
23373	7590	05/16/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			HAM, SEUNGSOOK	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/815,719	CARPINTERO ET AL.	
	Examiner	Art Unit	
	Seungsook Ham	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The abstract of the disclosure is objected to because "Figure 1" should be deleted; and line 3, "(169" should be corrected to --(16)--. Correction is required. See MPEP § 608.01(b).

Claim Objections

Claims 13 and 14 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claims 13 and 14 do not further limit the subject matter of claim 1 since claims 13 and 14 recites "coupling means" structure only.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9 and 12-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 9, "the housing" lacks antecedent basis.

Regarding claim 12, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

In claims 13 and 14, the preamble, "Coupling means" is confusing since claim 1 directed to a "direct coupled resonator filter". The examiner suggests amending the preamble of the claims to --Direct coupled resonator filter according to claim 1, wherein said coupling means...--. Moreover, in claim 14, "being adapted to present **different cross sections**" cannot be understood.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 8-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Liang et al. (US '033).

Liang et al. (figs. 6 and 7) discloses a direct coupled resonator filter comprising: a plurality of resonant cavities 104 having a dielectric resonator 112, an inner wall 105 separates two adjoining resonant cavities; the inner wall includes a slot 106 such that a coupling means 701 makes electrical contact with at least an edge surface of the slot (where the screw 702 is located at) and perpendicular with a vertical plane of the slot; a screw 703 being adapted to fasten the coupling means to inner wall; and the inner wall

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105 is in contact with upper lid 501, surrounding walls 102 and a bottom lid of a housing 113.

Claims 1, 2, 5, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Puurunen et al. (US 5,157,363).

Puurunen et al. (figs. 1-5) discloses a direct coupled resonator filter comprising: a plurality of resonant cavities having a resonator 2-4, an inner wall 5 separates two adjoining resonant cavities; the inner wall includes a slot 7 such that a coupling means 9 makes electrical contact with at least an edge surface of the slot; and the coupling means and the inner wall being made of the same metallic material (col. 3, lines 37-42).

Claims 1-6, 8-10, 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Cameron et al. (US 5,608,363).

Cameron et al. (figs. 2A, 3 and 8) discloses a direct coupled resonator filter comprising: a plurality of resonant cavities C1-C6 having a dielectric resonator R1-R6, an inner wall 50 separates two adjoining resonant cavities; the inner wall includes a slot (see fig. 3, where the probe 60 is located at) such that a coupling means 63 makes electrical contact with at least an edge surface of the slot (fig. 8, the probe 63 is in contact with the common wall 50) and perpendicular with a vertical plane of the slot; a mechanical fastening means 67 (see fig. 3) being adapted to fasten the coupling means to inner wall; and the inner wall 105 is in contact with upper lid 12, surrounding walls and a bottom lid of a housing 10. Moreover, the coupling means being a probe 63 with different cross sections (fig. 8).

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liang et al. (US '033).

Providing a coaxial resonator instead of dielectric resonator is considered as an obvious modification since it requires only a routine skill in the art. Moreover, using a probe instead of metallic strip is considered as an obvious design modification since it is well known in the art use a probe as a coupling means, and both elements can be used as a coupling means.

Claims 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cameron et al. (US 5,608,363).

Providing a coaxial resonator instead of dielectric resonator is considered as an obvious modification since it requires only a routine skill in the art. Moreover, using a screw as a mechanical fastening means is considered as an obvious design modification since it requires only a routine skill in the art.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liang et al. (US '033) or Cameron et al. (US 5,608,363) in view of Puurunen et al. (US 5,157,363).

Liang et al. and Cameron et al. does not show the inner wall and the coupling means are made of the same metallic piece. Puurunen et al. discloses a resonator filter

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having inner wall and the coupling means are made of the same metallic piece (col. 3, lines 37-42). It would have been obvious to one of ordinary skill in the art to use the same metallic piece for the inner wall and the coupling means in the device of Liang et al. or Cameron et al. for easy manufacturing and low cost as taught by Puurunen et al. (col. 2, lines 38-53).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Schulz et al. (fig. 1) discloses a cross-coupled coaxial filter;

Liang et al. (US '225, see fig. 2) discloses a dielectric resonator filter having coupling means disposed on an inner wall; and

Hershtig discloses a dielectric resonator filter having coupling means coupled between two adjacent resonators.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seungsook Ham whose telephone number is (571) 272-2405. The examiner can normally be reached on Monday-Thursday, 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571)-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Seungsook Ham
Primary Examiner
Art Unit 2817

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